INTRODUCTION

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The issue of non-strategic nuclear weapons, a serious military and political concern for more than a generation, seemed to vanish from the scene in the early post-Cold War years. Indeed, the Presidential Nuclear Initiatives (PNI) of George Bush, Mikhail Gorbachev, and Boris Yeltsin in 1991 and 1992 had apparently eliminated this category of weapons as an issue worthy of further consideration or intellectual concern.

But tactical nuclear weapons never really went away.

As the new millennium begins the United States finds itself facing a much-diminished Russian competitor that still holds a significant advantage in at least one category of weapons of mass destruction: non-strategic nuclear weapons (NSNW).[1] Russia still has thousands of these warheads, as well as multiple means for their delivery.[2] Despite the difficulties associated with establishing compliance with non-binding unilateral initiatives, the signs seem to indicate that Russia has not completely honored its PNI commitments of a decade ago. In fact, Russia appears to be adjusting its national security doctrine to place even greater emphasis on nuclear weapons. Meanwhile, the United States is trying to decide what value such weapons provide to its own security, and is considering whether to keep or eliminate its remaining stockpile. As part of this consideration, the U.S. government is debating the role of arms control in stabilizing the strategic (and sub-strategic) balances with Russia and China in Europe and Asia.

This book addresses many of the fundamental issues surrounding non-strategic nuclear weapons. It is the result of a conference on NSNW held November 2-3, 2000 at the Airlie Center in Warrenton, Virginia. Some 75 experts in arms control, nuclear weapons, and national security strategy from both sides of the political spectrum attended the workshop, which featured formal panel presentations and lively discussion on the topic. The

conference was hosted by the National Security Policy Division, Nuclear and Counterproliferation Directorate, Headquarters United States Air Force (AF/XONP). Most of the chapters in this book are the result of presentations at the conference.[3]

Themes

A number of themes that arose during the conference are discussed in this volume. First, even the experts find it difficult to precisely define what non-strategic nuclear weapons are. Traditional attempts at delineating between types of nuclear weapons—range, delivery vehicle, explosive power, and the like—were generally dismissed as overly simplistic and outmoded approaches that missed the nuances of these weapons. The best way to define them may be "by exclusion." That is, anything not captured by strategic arms control negotiations is, by default, non-strategic. Another perspective holds that *any* nuclear weapon must be strategic, given its potential for physical devastation and political chaos. A third view suggests that only one's adversary can define whether a weapon is strategic or non-strategic, based on its perceived use.

The role and value of formal arms control in trying to capture these weapons was also found wanting. Any future negotiation that focuses strictly on NSNW is unlikely to succeed—if it occurs at all. It is perhaps possible, on the other hand, to envisage talks that consider *all* nuclear warheads in one general category, rather than attempting to break them down into "strategic" versus "non-strategic."

All the participants acknowledged Russia's large asymmetrical advantage in numbers of NSNW, and the fact that it is unwilling to implement the 1991 agreements or discuss NSNW in a separate, formal arms control forum. Yet the 1997 Helsinki Agreement indicated that Russia is willing to talk about NSNW to the degree that it benefits them or is linked to broader strategic issues. Russia's huge arsenal of tactical nuclear weapons is particularly unsettling given worries about Russia's future, its current weakness and possibilities for complete collapse, and the dangers for other states in confronting a weak, vulnerable,

nuclear armed state. All this leads to the concern over "loose nukes." As one participant put it, "the real worry about Russian NSNW is if they become someone else's NSNW."

Nor is China likely to be interested in arms control discussions over its sub-strategic nuclear forces—not that many Americans even consider China when talking about strategic issues. Therein lies another problem: China is a rising superpower, armed with nuclear weapons in a region of the world that the United States considers a strategic interest, but that country is often overlooked in Washington policy discussions and decisions.

The conferees agreed that a new paradigm was needed to replace traditional arms control as it related to non-strategic nuclear weapons. One alternative suggested a new round of unilateral initiatives similar to those the United States put forth in 1991. If the United States were to cut its NSNW even deeper, goes this argument, such moves might be reciprocated by other states, and could be codified later once all parties realized the benefits of such cuts.

On the other hand, after ten years the 1991-1992 PNIs have yet to bear fruit, if one accepts the widely held premise that Russia has not kept its end of that bargain. In addition, most observers believe that nuclear weapons are here to stay. In that sense, all nuclear weapons may indeed be becoming strategic, and there is therefore little reason to maintain the non-strategic distinction in any new paradigm.

Purpose of Non-Strategic Nuclear Weapons

So what is the role of nuclear weapons? Their key purpose, from an American perspective, is to deter coercion and aggression against the United States and its allies. To do this, the United States built a massive arsenal during the Cold War, eventually numbering some 15,000 strategic warheads and more than 20,000 tactical nuclear weapons.[4]

The second cornerstone of America's NSNW policy was to provide a nuclear presence in Europe, supporting NATO as the essential link between the European and North American allies. These weapons were part of NATO's triad: conventional forces, tactical nuclear weapons in theater, and U.S. and British strategic systems. The North Atlantic Treaty Organization's strategic concept still calls for the continued presence of such weapons in Europe, in order to maintain the transatlantic link to the United States and for purposes of creating political and military uncertainty in the mind of any potential opponent.

Their third purpose became evident in the 1990s: to deter the use of weapons of mass destruction (WMD) more broadly. During the Gulf War the United States government made it clear, for example, that any WMD use by Iraq would result in a "prompt, devastating retaliatory blow" in which no weapons would be ruled out. It was widely understood by both sides in the conflict that this meant nuclear weapons, specifically NSNW.

Whether the Bush administration which took office in January 2001 will honor these traditional roles for non-strategic nuclear weapons is uncertain. The 2001 Nuclear Posture Review, in coordination with the refinement of the national security strategy, the development of a new national defense strategy, and the Quadrennial Defense Review will help the new administration determine the role, if any, these weapons will play in the future.

Current U.S. NSNW Posture

Presidential Bush's nuclear initiatives in the fall of 1991 called for the withdrawal and eventual elimination of most U.S. NSNW, including the cancellation of all related research and development programs. The Clinton administration furthered this decision by eliminating naval nuclear capabilities on surface ships entirely. America's remaining non-strategic capabilities are now limited to gravity bombs delivered by tactical aircraft, and nuclear Tomahawk Land Attack Missiles (TLAM-Ns) delivered by submarine. The latter are not routinely deployed with the fleet. Precise numbers of warheads are classified, but

the total U.S. force is commonly understood to stand at about 1,300 bombs and 320 TLAM-Ns.[5] A significant proportion of these remaining weapons are still based in Europe, and several European states maintain nuclear delivery plans in their NATO war orders that would depend on U.S. warheads.[6]

Key issues for the existing NSNW force posture include deciding whether the United States should keep its current levels or reduce the numbers further, and determining the purposes for these remaining weapons and where to station them.

The perceived battlefield use and utility of these weapons has dropped significantly since the end of the Cold War. Nevertheless, the United States government maintains the firm belief that it must be able to deliver on its threat to use nuclear weapons in certain scenarios if its words are to be believed in international relations. And there exist some military operations that can only be accomplished using the particular effects that nuclear weapons provide. For those reasons the U.S. military maintains NSNW and the plans for their use.

One of the biggest challenges to planners in today's increasingly complicated world is determining how to respond to enemy chemical or biological weapons use. Are nuclear weapons appropriate for such retaliation? Even if the determination was made that they were, that does not necessarily imply the need for retaining NSNW for such cases, nor for concerns simply over the warheads themselves. True force projection capability also requires the platforms, support infrastructure, and trained and certified crews that have been maintained or can be brought to a proper level of readiness. The reality is that in such a situation the entire U.S. arsenal, strategic and non-strategic alike, would be available, although the use of strategic systems would raise serious concerns vis-à-vis several countries, including Russia.

The Role for Arms Control

Historically, nuclear arms control has focused primarily on long-range strategic systems, but Russia has always tried to include U.S. NSNW in arms control talks. From the Russian

perspective, nuclear weapons stationed in Europe and aimed at Russian soil should not be considered "non-strategic." The United States, on the other hand, has consistently rejected that position, and Russia has consistently conceded. Yet in 1997 Russian negotiators at the Helsinki Summit raised this old desire again by asking that NSNW be directly considered as part of any START III negotiations.

Should NSNW be considered in future arms control talks? Doing so would raise a plethora of new or recycled ideas and concerns. For example, should nuclear weapons be considered in one aggregate ceiling, or disaggregated into different categories? Is there a role for unilateral tacit bargaining? How will ballistic missile defenses affect the relationship with other nuclear nations? Is no-first-use a good idea? This book does not attempt to answer these questions directly, but its chapters do form the basis for understanding and debate regarding these issues.

About the Book

The book is divided into four sections, which take the reader through some of the key concerns and questions that arise when addressing non-strategic nuclear weapons. In the first section, "Defining NSNW," Lewis Dunn begins by reminding the reader of the multiple issues involved in the debate over NSNW. He raises a series of questions helpful in determining what we are talking about, and in explaining why the topic is so important.

Andrea Gabbitas tackles the daunting task of determining what makes a nuclear weapon non-strategic. After reviewing the reasons why this poses a problem, she surveys Russia's non-strategic arsenal and explains why a definition is necessary. She then describes the various means that have been proposed as a way of delineating NSNW from other nuclear weapons. One of the strengths of her chapter is the set of tables that show the types, ranges, yields and numbers of these weapons in each of the seven confirmed nuclear states.

Stanley Sloan reviews NATO's nuclear history and current policy issues, including the role for residual U.S. nuclear forces in Europe, the question of nuclear weapons and NATO enlargement, and reassuring Russia. He also addresses potential roles for the independent French and British nuclear forces. Maynard Glitman then describes NATO's continuing rationale for its NSNW strategy. The 1999 Alliance Strategic Concept reiterated that nuclear weapons, though de-emphasized since the Cold War's end, are still considered crucial to the defense of the Alliance by deterring potential adversaries.

Section two, "Contending Objectives," reviews the difficulty the United States would face if it decided to get rid of these weapons. For one thing, the United States has valid purposes for these weapons involving global deterrence and potential warfighting scenarios. Robert Gromoll and Dunbar Lockwood provide a practical perspective on this issue, as they ask several important questions that might explain why further progress on NSNW arms control has not been made. Can limits on these weapons be effectively verified? Does the United States have any bargaining leverage over Russia that would entice it to enter negotiations? Would the United States have to include its weapons in Europe? They are pessimistic about finding solutions to these conundrums.

Robert Joseph reminds the reader that one of the important military and political purposes for NSNW has traditionally been to provide regional deterrence in places around the globe other than Europe. That role remains, and may be even more important in today's world of proliferating weapons of mass destruction. Whether arms control can play a role in controlling these weapons is unclear but, according to Joseph, should remain a secondary consideration to military needs.

In the third section of the book, "Obstacles," we focus on the serious problems that block the path to NSNW arms control solutions. Philip Foley begins by emphasizing the verification difficulties that would arise in trying to assure compliance with any new arms control treaty. Verifiability must be considered an integral part of any potential agreement, he argues. Both sides

have a large tool kit of verification means available that they have developed in past arms control treaties.

Jack Mendelsohn provides a comprehensive list of other obstacles that need to be considered. These can be grouped under policy, operational, and arms control obstacles, and range from considerations over first-use doctrine to the relevance of limits on third party states.

David Yost then provides a superbly documented study of recent Russian perspectives on arms control and the role of non-strategic nuclear weapons. He points out that there are a number of reasons why Moscow would be uninterested in considering NSNW limits, not least of which is Russia's increasing reliance on nuclear weapons to overcome its economic decline and conventional military weakness.

In an equally in-depth manner, Kenneth Allen provides a cogent study of China's views of arms control, its nuclear policy and force structure, and its interpretation of Washington's recent foreign policy actions. Of particular interest is his section on possible nuclear employment scenarios for the Chinese leadership, focusing on crises involving Taiwan or India.

Part four, "Solutions," suggests a number of possible ways to successfully negotiate, implement, and verify future reductions in non-strategic nuclear weapons. Linton Brooks begins by delineating the diplomatic steps that would be required to deal with this set of weapons. These involve determining the real issues involved, concentrating on the safety and security of Russia's NSNW arsenal, and then applying traditional arms control options and considering external linkages or trade-offs.

Bill Potter also addresses practical steps for addressing the NSNW problem. These include transparency measures, formalizing the 1991 PNIs, developing new unilateral initiatives, or creating a cooperative defense strategy building on the success of the Cooperative Threat Reduction program. He then provides a valuable appendix that compares alternative estimates of Russia's current NSNW force structure.

Joe Pilat picks up on the cooperative defense theme as one possible solution to concerns surrounding an NSNW arms control agreement. To Dr. Pilat, the key is verification of any deal. He examines possible incentives for both the United States and Russia that might lead them to negotiate NSNW controls, and establishes a model framework for such negotiations that addresses such issues as scope, units of account, and costs. His suggestion is that any NSNW agreement must address warheads and materials, rather than delivery systems as in past agreements.

Jim Smith concludes the book with a thematic review of the four sections, followed by a discussion of the operational implications of this subject for the U.S. Air Force in its role as the caretaker for the bulk of America's NSNW arsenal. Over the short term, he suggests, the Air Force must continue to sustain, plan, and exercise with these weapons in case it is called upon to provide a military option. Over the medium term, the Air Force would be well advised to consider how it would go about withdrawing its NSNW from Europe, and what types of precision conventional forces would be needed in their place, should NATO ever decide to downsize or eliminate that leg of its deterrent forces. And in the long term, the Air Force must be prepared to adapt to formal arms control initiatives or agreements that affect these forces.

The book concludes with a series of appendices containing applicable papers and policy announcements related to NSNW, followed by short biographical sketches of the contributors.

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As Jim Smith says in his conclusion, the Air Force has "the most deep-seated appreciation for nuclear weapons, both strategic and non-strategic, and holds the highest stakes in their disposition… Today the Air Force has the unprecedented luxury of time to think, plan, and act in a deliberate manner to ensure survival and security in alternative futures with or without non-strategic nuclear weapons. It owes it to the nation to seize that opportunity and make the best of it." This book is an attempt to help that process through an open debate on the issue of controlling non-strategic nuclear weapons.

Endnotes

[1] Non-strategic nuclear weapons have gone by various names over the years. Primarily stationed in Europe and the Far East, as well as at sea, they have been known at different times as battlefield nuclear weapons, tactical nuclear weapons (TNW), theater nuclear weapons, theater nuclear forces (TNF), intermediate range nuclear forces (INF), short range nuclear forces (SNF), sub-strategic nuclear weapons (SNW), and so on. Although the common default used in this book is NSNW, not all conferees liked that term. Hence many of these terms may be found and used interchangeably throughout this book.

[2] See chapters 1 and 12 for a comparison of the range of estimates for Russia's existing NSNW stockpile. Some participants at the Airlie conference suggested that Russia may still have as many as 15,000 non-strategic nuclear weapons. At a minimum, Russia has 1,200 warheads for surface to air missiles, 1,600 bombs and missile warheads for aircraft, and 2,500 naval warheads (for aircraft, cruise missiles, and anti-submarine torpedos or missiles). "Russian Nuclear Forces 2000," NRDC Nuclear Notebook, *The Bulletin of the Atomic Scientists,* July/August 2000, pp. 70-71

[3] China was considered during the Airlie House conference, but the presenter was not able to prepare a chapter for this book. Due to the geopolitical importance of China, Chapter 10 was commissioned following the conference. It captures the points made during the Airlie conference. So do Chapters 3 and 4, which were both commissioned after the conference because the NATO representative at the session could not publish his remarks.

[4] According to the Natural Resources Defense Council, America's non-strategic stockpile peaked at almost 23,000 warheads in 1965. The U.S. strategic arsenal peaked years later, reaching 15,000 warheads in 1987, by which time NSNW numbers had already declined significantly. See "Figure of US Nuclear Stockpile, 1945-96," in the NRDC nuclear data archive at www.nrdc.org/nuclear/nudb/dafig9.asp.

[5] NRDC Nuclear Notebook, "U.S. Nuclear Forces, 2000," from *The Bulletin of the Atomic Scientists,* May/June 2000, pp. 69-70, lists 325 launchers and 320 warheads for Tomahawk sea-launched cruise missiles, and 1,350 B-61 bomb (mod 3, 4, and 10) warheads.

[6] See David Yost, *The U.S. and Nuclear Deterrence in Europe,* Adephi Paper no. 326 (London: Institute for International Security Studies, March 1999).